(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3: 13.11.2002 Bulletin 2002/46

(51) Int Cl.7: **G01N 15/14**

(11)

(43) Date of publication A2: 02.10.2002 Bulletin 2002/40

(21) Application number: 02006680.9

(22) Date of filing: 26.03.2002

(84) Designated Contracting States:

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

Designated Extension States:

AL LT LV MK RO SI

(30) Priority: 29.03.2001 JP 2001094878

15.06.2001 JP 2001182085

(71) Applicant: Sysmex Corporation Kobe-shi, Hyogo 651-0073 (JP) (72) Inventors:

 Ozasa, Masatsugu Kasai-shi, Hyogo 675-2312 (JP)

 Kosako, Tatsuya Kakogawa-shi, Hyogo 675-0111 (JP)

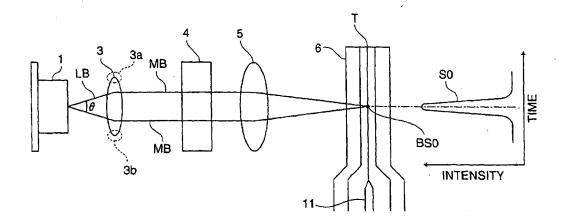
(74) Representative: HOFFMANN - EITLE Patent- und Rechtsanwälte Arabellastrasse 4 81925 München (DE)

(54) Flow cytometer

(57) A flow cytometer includes a flow cell (6) for flowing a sample liquid (T) in a flowing direction, to form a sample flow the sample liquid containing particles to be analyzed, a laser diode (1) radiating a laser beam (LB) having an elliptic cross section, a beam collimating section (3) for collimating the laser beam radiated from the laser diode (1), a beam spot forming section for focusing

the collimated beam at the sample flow in the flow cell (6) to form a beam spot (BSO), and a light receiving section for receiving light generated from the particles at the beam spot (BSO) to detect optical information of the particles, wherein the laser diode (1) is arranged such that a minor diameter of the elliptic section of the laser beam is parallel to the sample flow.

FIG.5





EUROPEAN SEARCH REPORT

Application Number

EP 02 00 6680

- 1		ERED TO BE RELEVANT	1 -			
Category	Citation of document with in of refevant pass	ndication, where appropriate, ages		levant claim	CLASSIFICATION OF THE APPLICATION (Int.Ci.7)	
X	EP 0 696 731 A (TOA MEDICAL ELECTRONICS) 14 February 1996 (1996-02-14)			,10	G01N15/14	
Y	* page 5, lines 15-25-26; figures 2, 3	35; page 7, lines	4-9 11-			
Y	6 October 1993 (199	- column 6, line 3;	4-9 11-			
Y	US 4 920 275 A (ITO 24 April 1990 (1990 * column 2, line 65	H YUJI) -04-24) - column 3, line 2 *	6-9 11-			
γ.	US 4 636 075 A (KNO 13 January 1987 (19 * column 3, lines 3	87-01-13)	7,1 17	1,13,		
					TECHNICAL F SEARCHED	ELDS (Int.Cl.7)
					GO1N	
	The present search report has	Oate of completion of the search			Examiner	
	MUNICH	17 September 200	2	Hoo	gen, R	
CATEGORY OF CITED DOCUMENTS X: particularly relevant if taken alone Y: particularly relevant if combined with another document of the same category A: technological background O: non-written disclosure P: intermediate: document		E : earlier patent do after the filling da ther D : document cited f L : document dited f	T: theory or principle underlying the i E: earlier partent document, but public after the filling date D: document cited in the application L: document cited for other reasons 8: member of the same patent family document			

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 02 00 6680

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

17-09-2002

Patent document cited in search report		Publication date		Patent family member(s)	Publication date	
EP 0696731	A	14-02-1996	JP	8050089 A	20-02-1996	
•			AU-	28322 9 5 A	22-02-1996	
•			CA	2155403 A1	09-02-1996	
			CN	1116708 A	14-02-1996	
			EP	0696731 A2	14-02-1996	
			US	5737078 A	07-04-1998	
EP 0564122	A	06-10-1993	JP	3187129 B2	11-07-2001	
			JP	5346391 A	27-12-1993	
			EP	0564122 A1	06-10-1993	
			US	5436717 A	25-07-1995	
JS 4920275	Α	24-04-1990	NONE			
US 4636075	Α	13-01-1987	NONE			

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82